

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

S3G TECHNOLOGY LLC,

Plaintiff,

v.

QV21 TECHNOLOGIES, INC.,

Defendant.

Case No. 6:20-CV-42

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff S3G Technology LLC (“S3G”) alleges as follows for its complaint against Defendant Qv21 Technologies, Inc. (“Defendant” or “Qv21”):

JURISDICTION AND VENUE

1. This is an action for patent infringement in violation of the Patent Act of the United States, 35 U.S.C. §§ 1 et seq.
2. This Court has original and exclusive subject matter jurisdiction over patent infringement claims for relief under 28 U.S.C. §§ 1331 and 1338(a).
3. The Court has specific and general personal jurisdiction over Defendant pursuant to due process and/or the Texas Long Arm Statute, due at least to Defendant’s substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this District.

4. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b) because, among other things, Defendant is subject to personal jurisdiction in this judicial district, Defendant has a regular and established place of business in Texas and in this judicial district, Defendant has purposely transacted business involving the use of the accused products in this judicial district, and sales to one or more customers in Texas, and certain of the infringing acts complained of herein occurred in this judicial district.

PARTIES

5. S3G is a limited liability company organized under the laws of the State of California with its principal place of business in Foster City, California. S3G has been, and continues to, develop technology-based solutions that facilitate economic empowerment and development. For example, S3G is developing mobile solutions that enable the authenticated access to different types of spaces, including to buildings and portions thereof. The information that S3G's technology solutions may collect and maintain about its users further enable the delivery of educational and other services that may help these users to emerge from poverty and change their lives and those of their families. In connection with its mobile solutions, S3G has obtained patents covering its technology both in the United States and worldwide. For example, its patent portfolio includes additional granted patents and pending applications in Mexico, Brazil, Nicaragua, Costa Rica, India, Philippines and Indonesia. S3G is a Massachusetts Institute of Technology (MIT) Computer Science and Artificial Intelligence Lab (CSAIL) Startup, and is a member of MIT CSAIL Alliances' Startup Connect.

6. The Managing Member of S3G, who is also the named inventor of the asserted patents, is an award-winning MIT-trained researcher, technologist and inventor who has used and continues to use innovative technologies to address many of the world's critical problems,

including poverty, access to financial services and access to clean drinking water. The World Economic Forum has recognized him for his professional accomplishments, commitment to society and potential to contribute to shaping the future of the world.

7. S3G is informed and believes, and on that basis alleges, that QV21 is a Delaware corporation having a place of business at 609 Castle Ridge Road, Suite 320, Austin, TX 78746. S3G is further informed and believes, and on that basis alleges, that QV21 derives a significant portion of its revenue from the promotion and/or sale of its products and services, and use of its supporting system(s), server(s), and software, including at least The Logistics Framework (TLF) platform, including the TLF Driver module for devices running the Android operating system, other QV21 applications for smartphones and other devices, and its other supporting system(s), server(s), and software (“Accused Instrumentalities”). S3G is informed and believes, and on that basis alleges, that, at all times relevant hereto, Defendant has conducted and continues to conduct business, including the manufacture, use, distribution, promotion, and/or the offer for sale and sale of its products and services, including the Defendant app in this Judicial District. On information and belief, Defendant does business itself, or through its subsidiaries, affiliates, and franchisees, in the State of Texas and the Western District of Texas.

PATENTS

8. United States Patent No. 8,572,571 (the “’571 patent”) entitled “Modification of Terminal and Service Provider Machines Using an Update Server Machine” was duly and legally issued on October 29, 2013. A true and correct copy of the ’571 patent is attached hereto as Exhibit “A” and incorporated herein by this reference. By a series of assignments, S3G is now the assignee of the entire right, title and interest in and to the ’571 patent, including all rights to enforce the ’571 patent and to recover for infringement. The ’571 patent is valid and in force.

9. United States Patent No. 9,304,758 (the “’758 patent”) entitled “Modification of Terminal and Service Provider Machines Using an Update Server Machine” was duly and legally issued on April 5, 2016. A true and correct copy of the ’758 patent is attached hereto as Exhibit “B” and incorporated herein by this reference. S3G is the assignee of the entire right, title and interest in and to the ’758 patent, including all rights to enforce the ’758 patent and to recover for infringement. The ’758 patent is valid and in force.

The Technical Problems Addressed by the Patents-in-Suit

10. The ’571 and ’758 patents (collectively, the “Asserted Patents”) disclose that at the time of the invention, often times, after a computerized system has been initially constructed, modifications may be required, either to improve the functionality of the system or to customize the system to meet new requirements. Typically, a software application includes computer-executable instructions that are not able to be edited or modified directly by a developer. Instead, the developer may make the required changes by either creating or editing original source code. Once edited or modified, the updated source code must then be recompiled or translated into an updated set of computer-executable instructions. These updated set of computer-executable instructions often includes a relatively large amount of information, which must then be distributed to the hardware devices in the system as an updated software application. ’571 Patent, Col. 2:1-17.¹

11. At the time of the invention, in many situations it may be difficult to distribute a newly compiled version of the updated software application to all of the devices in the system. This is particularly true if the system is distributed over a large geographic area making it difficult to locate each system device and transport it to a central location where the newly

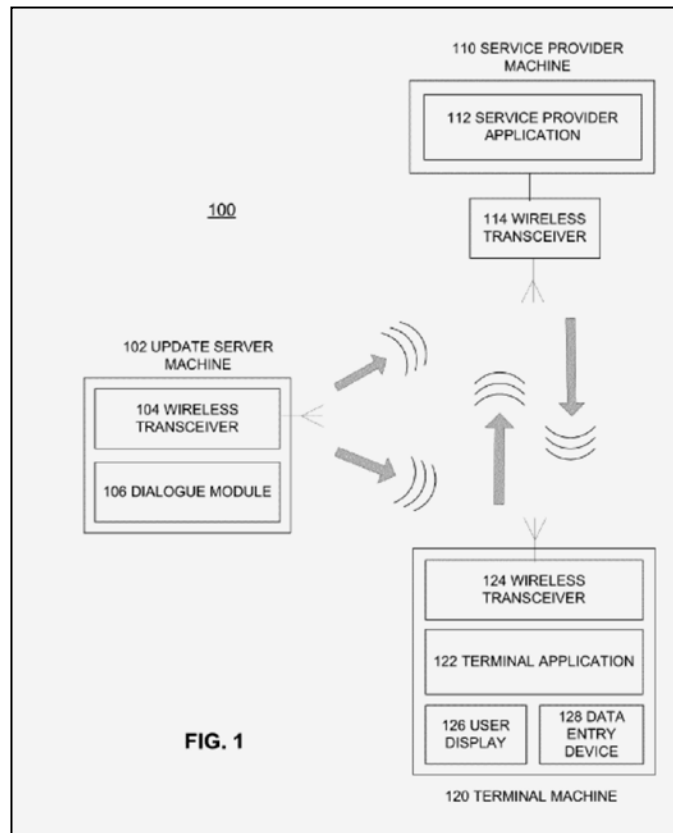
¹ Unless otherwise indicated, all citations are to the ’571 patent.

updated computer-executable instructions can be uploaded. This lack of physical access to the devices often means that the new software application cannot be uploaded using a traditional wired connection (*e.g.*, an interface cable). Col. 2:18-26.

12. The Asserted Patents further explain that using a wireless communications network to upload the updated computer-executable instructions also has several significant drawbacks. First, the size of the updated computer-executable instructions may exceed the transmission capabilities of the communications network, *i.e.*, the size of the file is too large to be uploaded. Second, even if the updated computer-executable instructions can be uploaded and transmitted over the wireless network, it may take an excessive amount of time. Third, these problems are exacerbated if (1) the computer system includes a large number of devices that must be updated with the modified computer-executable instructions and (2) the devices contain different versions of the application or multiple applications need updates. Col. 2:26-52.

The Claimed Solution to the Technical Problems

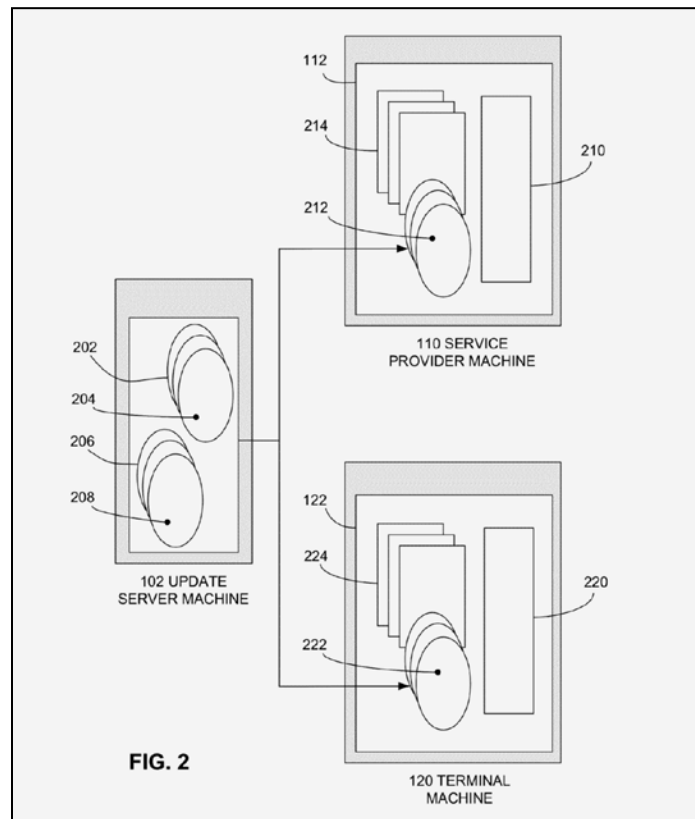
13. The Asserted Patents are directed to a technological solution, *i.e.*, improving the way computers operate. In particular, the Asserted Patents claim a specific computerized system able to provide efficient modification of a specific type of software applications that are distributed across a network of remote devices. Col. 2:53-55. As an example, FIG. 1 (below) discloses, and the Asserted Patents claim, a unique and very specific type of computer system structure involving three entities: a service provider machine 110, a terminal machine 120 and an update server machine 102. Within this specific system, a terminal machine 120 and a service provider machine 110 communicate via applications running on the machines (as depicted by the vertical arrows in the figure).



14. As shown below in FIG. 2, the applications running on these machines have a very specific structure: namely, the terminal application 122 comprises first computer-executable instructions 224, which has been construed to mean “computer instructions that can be directly executed on a processor,”² and first code 222. Col. 7:40-45. The Asserted Patents expressly define that “code” is not just any generic software code; instead, the Asserted Patents teach a very specific structure for “code,” clearly stating that “[t]he code represents at least some information that *must be translated* by the software application before it can be implemented on

² See *S3G Tech. LLC v. Unikey Techs., Inc.*, Civil Action No. 6:16-cv-400-RWS-KNM, Dkt. 74 [Report and Recommendation of United States Magistrate Judge], attached hereto as Exhibit C; see also Dkt. 91 [Order Adopting Rep. & Rec. of Mag. Judge], attached hereto as Exhibit D.

the machine processor.” Col. 4:21-25 (emphasis added).³ The terminal application conducts the terminal machine’s portion of the dialogue with the service provider machine.



15. In like fashion, as shown in FIG. 2, the service provider machine runs an application having a very specific structure: namely, the provider application 112 comprises second computer-executable instructions 214, which can be directly executed on a processor, and second code 212, which must be translated before it can be executed on a processor. The provider application conducts the service provider’s portion of the dialogue with the terminal machine.

16. FIGS. 1 and 2 also show that the computer system structure in the Asserted Patents is unique in having a third entity, an update server machine. The update server machine

³ Consistent with the specification, the term "code" has been construed to mean "information that must be translated before it can be executed on a processor." See Exhibit C at Appendix A.

is able to communicate with both the terminal machine and the service provider machine (as depicted by the diagonal arrows in the FIG. 1). The update server machine also has a unique and very specific data structure for communicating with the terminal and service provider machines: namely, the update server machine sends one or more dialogue modules, which has been construed to mean “code or instructions related to a dialogue sequence.”⁴

17. As part of the dialogue between the terminal machine and the service provider machine, the terminal machine is modified by receiving a terminal dialogue module. As noted, the dialogue module is a specific structure that contains information that must be translated by the software application before it can be implemented on the machine processor. After receiving the dialogue module, specific actions can be taken. For example, the dialogue module may replace existing terminal code already saved on the terminal machine or the terminal code may supplement other code previously saved on the terminal machine. Col. 8:44-52. These steps produce first updated code, which adapts the terminal application to display a further prompt for the terminal machine’s portion of a modified dialogue sequence with the service provider machine. Significantly, when terminal and service provider applications are modified using a dialogue module it does not result in replacing the prior applications with entirely new applications. This is important because this system with its specific structures results in a number of technological benefits: namely, computing resource, improved network utilization, and design efficiencies. Col. 6:47-49; 14:43-48; FIGS. 8A-B.

18. During litigation of the Asserted Patents, a Court also held that the “dialogue module” is a very specific type of structure:

The recital [in the claims] of “sending a . . . dialogue module” demonstrates that the claim uses the term “module” to refer to *a particular type of structure rather*

⁴ *Id.*

than to any structure for performing a function. Further, the specification is consistent with such an interpretation by disclosing that a “dialogue module” can contain code or other data and can be communicated....

Exhibit C at 12 (emphasis added).

19. The Court also held that the claimed three entity system of the Asserted Patents also is a particular structure. Specifically, the Court stated that “the surrounding claim language [of terminal machine] provides details regarding how the terminal machine interacts with other components . . . in a way that . . . inform[s] the structural character of [it] or otherwise impart[s] structure.” *Id.* at 23. The Court held that “[s]ubstantially the same analysis” applies to service provider and update server machines. *Id.* at 26, 29.

20. Among other features, the Asserted Patents thus claim an unconventional and inventive solution to the problem of transmitting large executable files required to replace applications running on remote devices, which previously required networks having massive bandwidth. Specifically, the Asserted Patent disclose the unconventional and inventive system and method of transmitting dialogue modules to terminal and service provider machines to modify and/or update software applications running on those machines. The software applications also are unconventional and inventive in utilizing both computer-executable instructions, which can be directly executed on a processor, and code, which must be translated before it can be executed on a processor, to solve this technological problem.

21. The use of “dialogue modules” containing “code” also results in various technical benefits. For example, as the Asserted Patents explain, transmitting an entire software application may represent a “large amount of information” that may not be feasible to transmit due to bandwidth limitations on data transfer over the network. Col. 2:31-32. And, even if an upload of the entire modified application is possible, it may take an unacceptable amount of time due to the slow transfer rate of a wireless network.” Col. 2:40-44. By comparison, the Asserted

Patents disclose that, “[i]n a preferred embodiment, the dialogue module is less than 1 Mb to facilitate communication over a network with limited data transfer capacity.” Col. 6:47-49. Therefore, the use of the “dialogue modules” reduces network bandwidth utilization, thereby allowing efficient modification of applications running on remote devices on a network. Another benefit of using “dialogue modules” is that it enables the use of design tools that facilitate their development and modification. Col. 14:43-48, FIGS. 8A,B. These tools thus enable and improve the efficiency of modifying applications.

22. During the prosecution of the Asserted Patents, the United States Patent Examiner allowed the claims because, among other things, this unique structure described and claimed in the Asserted Patents was not known and would not have been obvious:

As Applicants pointed out in the Remarks, **the prior art of record do not disclose and/or fairly suggest at least claimed limitations recited** in such manners in independent claim 1 " ... an update server machine comprising a processor and operable for sending a terminal dialogue module to the terminal machine and a provider dialogue module to the service provider machine to allow the terminal machine and the service provider machine to conduct a dialogue sequence with each other [...]....wherein the **terminal application comprises a first set of computer-executable instructions and a first set of code, wherein the first set of computer-executable instructions are able to execute directly on a terminal processor of the terminal machine, and wherein the first set of code is not able to execute directly on the terminal processor;** ... wherein the first set of updated code adapts the terminal application to use a second sequence of prompts and a second sequence of data entries for the terminal machine's portion of a modified dialogue sequence with the service provider machine...

These **claimed limitations are not present in the prior art of record and would not have been obvious**, thus all pending claims are allowed.

Exhibit E [’571 FH, Notice of Allowability, dated July 11, 2013, at Examiner’s Statement of Reasons for Allowance] (emphasis added).

FIRST CLAIM FOR RELIEF

Infringement of the ’571 patent

23. S3G refers to and incorporates herein by reference the preceding paragraphs.

24. Qv21, by the acts complained of herein, and by making, using, selling, offering for sale, and/or importing in the United States, including in the Western District of Texas, instrumentalities embodying the invention, has in the past, does now, and continues to infringe the '571 patent directly, contributorily, and/or by inducement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

25. At least since the filing of this complaint, Qv21 has had actual knowledge of the '571 patent.

26. On information and belief, QV21 has directly infringed one or more claims of the '571 patent by making, using, importing, supplying, selling, or offering for sale the Accused Instrumentalities. By doing so, QV21 has directly infringed at least claim 2 of the '571 patent.

27. QV21 provides a system for modifying a terminal machine and a service provider machine.

28. The accused system includes an update server machine (*e.g.*, a smart phone or other computing device accessing the QV21 system, *e.g.*, accessing the QV21 TLF Dispatcher module) comprising a processor and operable for sending a terminal dialogue module (*e.g.*, terminal machine portion of a scheduled job) to the terminal machine (*e.g.*, an Android smart phone or other Android computing device running the QV21 TLF Driver module) and a provider dialogue module (*e.g.*, service provider machine portion of a scheduled job) to the service provider machine (*e.g.*, QV21 server) to allow the terminal machine (*e.g.*, an Android smart phone or other Android computing device running the QV21 Driver module) and the service provider machine (*e.g.*, QV21 server) to conduct a dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) with each other. The accused system includes an update server machine (*e.g.*, a smart phone or other computing device accessing the QV21 TLF Dispatcher

module) comprising a processor. Alternatively, the accused system includes an update server machine (*e.g.*, QV21 server) comprising a processor. One of ordinary skill would understand that smart phones or other computing devices necessarily comprise a processor, *e.g.*, to run the operating system, applications, etc. The accused system includes an update server machine (*e.g.*, a smart phone or other computing device accessing the QV21 TLF Dispatcher module) that is operable for sending a terminal dialogue module (*e.g.*, terminal machine portion of a scheduled job) to the terminal machine (*e.g.*, an Android smart phone or other Android computing device running the QV21 TLF Driver module). Alternatively, the accused system includes an update server machine (*e.g.*, QV21 server) that is operable for sending a terminal dialogue module (*e.g.*, terminal machine portion of a scheduled job) to the terminal machine (*e.g.*, an Android smart phone or other Android computing device running the QV21 Driver module (terminal application)). The QV21 system can be accessed from any device, including PCs, Android and iOS tablets, and Android and iOS phones. Therefore, these and other devices that can access the QV21 system constitute update server machine, which is a computing device capable of sending one or more dialogue modules. For example, without limitation, a dialogue module is sent from a dispatcher's device accessing the QV21 Dispatcher module to the QV21 server. The QV21 server then sends information to a driver's QV21 app, *e.g.*, running the TLF Driver module. On information and belief, the format of the information that is sent from the QV21 server to the QV21 app is, for example, JSON. The accused system includes an update server machine (*e.g.*, a smart phone or other computing device accessing the QV21 Dispatcher module) that is operable for sending a provider dialogue module (*e.g.*, service provider machine portion of a scheduled job) to the service provider machine (*e.g.*, QV21 server). This is done using, for example, HTTP. For example, without limitation, after receiving the respective dialogue module, drivers

can view scheduled jobs. For example, without limitation, after receiving a respective dialogue module, a driver will be prompted to enter “vehicle inspection and hours of service” associated with one or more scheduled jobs. In response to these prompts, the driver selects the appropriate data entry (*e.g.*, button), for example, without limitation, on-duty, off-duty, driving, etc.

Thereafter, the driver is provided additional prompts. Alternatively, the accused system includes an update server machine (*e.g.*, QV21 TLF platform) that is operable for sending a provider dialogue module (*e.g.*, service provider machine portion of a scheduled job) to the service provider machine (*e.g.*, QV21 server).

29. The accused system includes a terminal machine (*e.g.*, an Android smart phone or other Android computing device running the QV21 Driver module) that is configured to run a terminal application (*e.g.*, QV21 Driver module for Android) that conducts the terminal machine’s portion of the dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) with the service provider machine (*e.g.*, QV21 server). The terminal application conducts the terminal machine's portion of the dialogue sequence with the service provider machine because, for example, without limitation, using the QV21 Driver module, a driver is able to access, edit and update information associated with a scheduled job. The driver is prompted to edit or update the scheduled job, *e.g.*, through vehicle inspection and hours of service. This information is necessarily communicated to the QV21 server because, for example, without limitation, it must be stored and available to the dispatcher, including in the future, and also for “daily reports.” The terminal application is operable for displaying a prompt in a first sequence of prompts and accepting a user data entry in an associated first sequence of user data entries as explained herein, including above. The accused system includes a terminal application (*e.g.*, QV21 Driver module for Android), and one of ordinary skill would understand that the

QV21 Driver module for Android comprises a first set of computer executable instructions and a first set of code, wherein the first set of computer-executable instructions are able to execute directly on a terminal processor of the terminal machine, and wherein the first set of code is not able to execute directly on the terminal processor. For example, without limitation, the Android Runtime (ART) comprises computer executable instructions that are able to execute directly on a terminal processor, while the app's bytecode is not able to execute directly on the terminal processor.

30. The accused system includes a service provider machine (*e.g.*, QV21 server) that is configured to run a provider application (*e.g.*, QV21 server application) that conducts the service provider machine's portion of the dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) with the terminal machine. As explained herein, user data entries (corresponding to the prompts) are communicated from the terminal application on the terminal machine to the provider application on the service provider machine. The accused system includes a provider application (*e.g.*, QV21 server application, which, upon information and belief, is a .Net application), and one of ordinary skill would understand that the QV21 server application comprises a second set of computer-executable instructions and a second set of code, wherein the second set of computer-executable instructions are able to execute directly on a provider processor of the service provider machine, and wherein the second set of code is not able to execute directly on the provider processor. For example, without limitation, the CLR that manages the execution of the .Net program comprises computer-executable instructions which are able to execute directly on a provider processor, while the .Net program is not able to execute directly on the provider processor.

31. In the accused system, the terminal dialogue module (*e.g.*, terminal machine portion of a scheduled job) modifies the first set of code to produce a first set of updated code wherein the first set of updated code adapts the terminal application to use a second sequence of prompts and a second sequence of data entries for the terminal machine's portion of a modified dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) with the service provider machine. As explained above, when a dispatcher inputs a scheduled job using the QV21 system, information is communicated to the driver's QV21 app (terminal application on the terminal machine). As also explained above, without limitation, the dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) is evidenced in the one or more prompts associated with a scheduled job. In response, the user selects the appropriate data entry (*e.g.*, button), *e.g.*, on-duty, off-duty, etc. Additional prompts and associated data entries include, for example, without limitation, "Dispatchers commands ... and the responses." At least a portion of the information is necessarily stored on the terminal machine because, for example, without limitation, the scheduled job is necessarily available, even later, on the driver's Android device and allows the driver to select it even at a later time. Therefore, the terminal dialogue module modifies the first set of code to produce a first set of updated code. The first set of updated code adapts the terminal application to use a second sequence of prompts and a second sequence of data entries for the terminal machine's portion of a modified dialogue sequence with the service provider machine. For example, without limitation, as already explained herein, a second sequence of prompts and a second sequence of data entries is demonstrated when new scheduled jobs are added or updated, and they appear on the driver's Android device. This necessarily represents a modified dialogue sequence with the service provider machine. In the accused system, the provider dialogue module (*e.g.*, service provider machine portion of a scheduled job)

modifies the second set of code to produce a second set of updated code wherein the second set of updated code adapts the provider application to use a second sequence of prompts and a second sequence of data entries for the service provider machine's portion of the modified dialogue sequence with the terminal machine. As discussed herein, when a dispatcher inputs a scheduled job using their device (*e.g.*, PC or mobile device), information is communicated to the QV21 server application (provider application on the service provider machine). As also explained herein, the dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) is evidenced in the one or more prompts and the corresponding user data entry (*e.g.*, button). Additional prompts and data entries include, for example, without limitation, “Dispatchers commands ... and the responses. At least a portion of the information is necessarily stored on the provider machine because, for example, without limitation, the scheduled job is available on the QV21 server as well as on different devices, including at a later time. Therefore, the provider dialogue module modifies the second set of code to produce a second set of updated code. The second set of updated code adapts the provider application to use the second sequence of prompts and the second sequence of data entries for the service provider machine's portion of the modified dialogue sequence with the terminal machine. For example, without limitation, as already explained herein, a second sequence of prompts and a second sequence of data entries is demonstrated when new scheduled jobs are added or updated, and they appear on a driver’s Android device. In the accused system, the terminal dialogue module (*e.g.*, terminal machine portion of a scheduled job) does not modify the first set of computer-executable instructions, as is readily understood by one of ordinary skill. For example, without limitation, as already explained herein, ART comprises the first set of computer-executable instructions and is not modified by the terminal dialogue module. In the accused

system, the provider dialogue module (*e.g.*, service provider machine portion of a scheduled job) does not modify the second set of computer-executable instructions, as is readily understood by one of ordinary skill. For example, without limitation, as already explained herein, the CLR comprises the second set of computer-executable instructions and is not modified by the provider dialogue module.

32. On information and belief, QV21 has knowingly and actively induced the infringement of one or more of the '571 patent claims by, *inter alia*, marketing, promoting, and offering for use the Accused Instrumentalities, knowingly and intending that the use of such instrumentalities by QV21 customers and by users infringes the '571 patent. For example, QV21 intends to induce such infringement by, among other things, promoting users to download and run its mobile applications, including at least applications for devices running the Android operating system, knowing that the use of the its applications on a user's portable device or smart phone in connection with supporting systems such as its server(s) infringes one or more claims of the '571 patent.

33. On information and belief, QV21 has contributed to the infringement of the '571 patent by, *inter alia*, marketing and promoting products and services. Defendant has used and promoted within the United States the Accused Instrumentalities, which are not staple articles or commodities of commerce suitable for substantial non-infringing use, and are known by QV21 to be especially made or especially adapted to the infringe the '571 patent. As a result, QV21's Accused Instrumentalities have been used by its customers and by users to infringe the '571 patent. QV21 continues to engage in acts of contributory infringement of the '571 patent.

34. By reason of the acts of QV21 alleged herein, S3G has suffered damage in an amount to be proved at trial.

35. QV21 threatens to continue to engage in the acts complained of herein and, unless restrained and enjoined, will continue to do so, all to S3G's irreparable injury. It would be difficult to ascertain the amount of compensation that would afford S3G adequate relief for such future and continuing acts, and a multiplicity of judicial proceedings would be required. S3G does not have an adequate remedy at law to compensate it for the injuries threatened.

SECOND CLAIM FOR RELIEF

Infringement of the '758 patent

36. S3G refers to and incorporates herein by reference preceding paragraphs.

37. QV21, by the acts complained of herein, and by making, using, selling, offering for sale, and/or importing in the United States, including in the Western District of Texas, instrumentalities embodying the invention, has in the past, does now, and continues to infringe the '758 patent directly, contributorily, and/or by inducement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

38. At least since the filing of this complaint, QV21 has had actual knowledge of the '758 patent.

39. On information and belief, QV21 has directly infringed one or more claims of the '758 patent by making, using, importing, supplying, selling, or offering for sale the Accused Instrumentalities. By doing so, QV21 has directly infringed at least claim 1 of the '758 patent.

40. The accused system includes a method of conducting a dialogue between a terminal machine and a service provider machine.

41. The accused system includes a method comprising displaying a first prompt on a terminal display of a terminal machine (*e.g.*, an Android smart phone or other Android computing device running the QV21 Driver module) by running a terminal application (*e.g.*,

QV21 Driver module for Android), the terminal application comprising first computer-executable instructions and first code that conduct the terminal machine's portion of the dialogue. The terminal application displays a first prompt and accepts a first data entry at the terminal machine, wherein the first data entry is associated with the first prompt. For example, without limitation, using the QV21 Driver module, a driver is able to go "On Duty" to his or her job, and the user is prompted to enter either "On Duty" or "Off Duty" for checking into the job. Additionally, a driver is prompted to enter "vehicle inspection and hours of service." . The driver is also prompted with "Dispatcher commands" and is able to provide responses to those prompts, e.g., responses to the commands. This information is necessarily communicated to the QV21 server because, for example, without limitation, it must be stored and available to the user in the future, and is available in "daily reports." The TLF Driver module is compatible with and runs on Android smart phones and other Android computing devices. For example, the TLF Driver module "contains our custom application designed specifically to harness the computing power and cost-effectiveness of the Android operating system on smartphones." One of ordinary skill would understand that the terminal application (*e.g.*, QV21 Driver module for Android) comprises first computer executable instructions and first code. For example, without limitation, the Android Runtime (ART) comprises computer executable instructions, while the app's bytecode comprises code.

42. As explained above, the accused system includes a method comprising accepting a first data entry at the terminal machine (*e.g.*, an Android smart phone or other Android computing device running the QV21 Driver module), wherein the first data entry is associated with the first prompt.

43. The accused system includes a method comprising communicating information from the terminal machine (*e.g.*, an Android smart phone or other Android computing device running the QV21 Driver module) to the service provider machine (*e.g.*, QV21 server), the information associated with the first data entry, the service provider machine (*e.g.*, QV21 server) using a provider application (*e.g.*, QV21 server application), the provider application comprising second computer-executable instructions and second code that conduct the service provider machine's portion of the dialogue. In the accused system, information from the terminal machine is communicated to the service provider machine, the information associated with the first data entry. For example, without limitation, using the QV21 Driver module, a driver is able to enter vehicle inspection and hours of service. This information is necessarily communicated to the QV21 server because, for example, without limitation, it must be stored and available to the dispatcher in the future and in "daily reports." The provider application (*e.g.*, QV21 server application, which, upon information and belief, is a .Net application) runs on the service provider machine (*e.g.*, QV21 server), and one of ordinary skill would understand that the QV21 server application comprises second computer-executable instructions and second code. For example, without limitation, the CLR that manages the execution of the .Net program comprises computer-executable instructions, while the .Net program comprises code.

44. The accused system includes a method comprising receiving, at the terminal machine (*e.g.*, an Android smart phone or other Android computing device running the QV21 Driver module), a terminal dialogue module (*e.g.*, terminal machine portion of a scheduled job) that replaces at least a portion of the first code to produce first updated code, wherein the first updated code adapts the terminal application (*e.g.*, QV21 Driver module for Android) to display a second prompt for the terminal machine's portion of a modified dialogue sequence (*e.g.*, series

of prompts and corresponding user data entries) with the service provider machine, wherein at least one of the first code, second code, and first updated code comprise Java Byte code. For example, when a dispatcher inputs a scheduled job using the QV21 Dispatch module, information is communicated to the driver's QV21 Driver module (terminal application on the terminal machine). The format of the information that is sent from the QV21 server to the driver's QV21 app is, based on information and belief, for example, JSON. At least a portion of the information is necessarily stored on the terminal machine because, for example, without limitation, the scheduled job appears on the driver's Android device and allows the driver to select it even at a later time. Therefore, the terminal dialogue module replaces at least a portion of the first code to produce first updated code. The dialogue sequence (*e.g.*, series of prompts and corresponding user data entries) is evidenced in the one or more prompts associated with a scheduled job and the corresponding user data entry of selecting hours of service (*e.g.*, button), for example, without limitation, on-duty, off-duty, driving, etc. Additional prompts and associated data entries include, for example, without limitation, "Dispatcher commands ... and the responses." At least one of the first code, second code, and first updated code comprise Java Byte code. As explained above, the terminal application is identified as, for example, without limitation, the QV21 Driver module for Android, and the first code is, for example, without limitation, the app's bytecode. One of ordinary skill would understand this to comprise Java Byte code.

45. On information and belief, QV21 has knowingly and actively induced the infringement of one or more of the '758 patent claims by, *inter alia*, marketing, promoting, and offering for use the Accused Instrumentalities, knowingly and intending that the use of such instrumentalities by QV21 customers and by users infringes the '758 patent. For example, QV21

intends to induce such infringement by, among other things, promoting users to download and run its mobile applications, including at least applications for devices running the Android operating system, knowing that the use of the its applications on a user's portable device or smart phone in connection with supporting systems such as its server(s) infringes one or more claims of the '758 patent.

46. On information and belief, QV21 has contributed to the infringement of the '758 patent by, *inter alia*, marketing and promoting products and services. Defendant has used and promoted within the United States the Accused Instrumentalities, which are not staple articles or commodities of commerce suitable for substantial non-infringing use, and are known by QV21 to be especially made or especially adapted to the infringe the '758 patent. As a result, QV21's Accused Instrumentalities have been used by its customers and by users to infringe the '758 patent. QV21 continues to engage in acts of contributory infringement of the '758 patent.

47. By reason of the acts of QV21 alleged herein, S3G has suffered damage in an amount to be proved at trial.

48. QV21 threatens to continue to engage in the acts complained of herein and, unless restrained and enjoined, will continue to do so, all to S3G's irreparable injury. It would be difficult to ascertain the amount of compensation that would afford S3G adequate relief for such future and continuing acts, and a multiplicity of judicial proceedings would be required. S3G does not have an adequate remedy at law to compensate it for the injuries threatened.

JURY DEMAND

49. S3G demands a jury trial on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, S3G prays for relief as follows:

- A. For an order finding that '571 and '758 patents are valid and enforceable;
- B. For an order finding that Defendant has infringed '571 and '758 patents directly, contributorily and/or by inducement, in violation of 35 U.S.C. § 271;
- C. For an order finding that Defendant's infringement is willful;
- D. For an order temporarily, preliminarily and permanently enjoining Defendant, its officers, directors, agents, servants, affiliates, employees, subsidiaries, divisions, branches, parents, attorneys, representatives, privies, and all others acting in concert or participation with any of them, from infringing '571 and '758 patents directly, contributorily and/or by inducement, in violation of 35 U.S.C. § 271;
- E. For an order directing Defendant to file with the Court, and serve upon S3G's counsel, within thirty (30) days after entry of the order of injunction, a report setting forth the manner and form in which it has complied with the injunction;
- F. For an order awarding S3G general and/or specific damages adequate to compensate S3G for the infringement by Defendant, including a reasonable royalty and/or lost profits, in amounts to be fixed by the Court in accordance with proof, including enhanced and/or exemplary damages, as appropriate, as well as all of the profits or gains of any kind made by Defendant from its acts of patent infringement;
- G. For an order awarding S3G pre-judgment interest and post-judgment interest at the maximum rate allowed by law;
- H. For an order requiring an accounting of the damages to which S3G is found to be entitled;
- I. For an order declaring this to be an exceptional case pursuant to 35 U.S.C. § 285 and awarding S3G its attorneys' fees;

- J. For an order awarding S3G its costs of court; and
- K. For an order awarding S3G such other and further relief as the Court deems just and proper.

DATED: January 22, 2020

Respectfully Submitted,

By: /s/ Charles Ainsworth

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